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DIRECTORATE OF MILITARY PROGRAMS

ENGINEERING & CONSTRUCTION NEWS

VOLUME 1 NUMBER 7 JULY 1999

JULY'S THEME: *Engineering Excellence*

CARL'S NOTES

The theme for this month's issue of "News" is "Engineering Excellence." This is term Dwight and I have given to our initiative to focus our organizational attention on the need to maintain our technical competencies. As I have mentioned in previous articles, our engineering and scientific problem solving capabilities are why we exist. We are finding however, that there are many pressures on our organization that could cause erosion of those capabilities if left unattended. To assure we remain "The Engineer team of choice – responding to our Nation's needs in peace and war, " we must develop a plan that addresses the many components that contribute to our capability. To name just a few of those elements: levels and type of work, workforce development, registration, contracting out percentages, MCX's, DX's, R&D efforts, our technology, information management, etc. Right now we are doing many things to retain capability but are not sure if we are doing the right things. That is what our "Engineering Excellence" effort is designed to do…determine the "right things" for our organization to focus on to remain the "Premier Engineering Organization." This is what we are doing at Headquarters. However we can not do it without you, especially you leaders in the MSC's, Laboratories and Districts. Under our new Project Management Business Process (PMBP), a greater amount of your time should be devoted to development of your people and their technical skills.

Our Project Delivery Team (PDT) conference is presently being held in St. Paul. Dwight and I attended most of the conference and hosted one day devoted to the Construction portion of the Team. Let me first say the proceedings attended by approximately 300 persons were outstanding. There were many great presentations with ample opportunity for offline discussions and sharing of information. However the highlight for me was the amount of energy going into not only making the process work but a sincere desire to make it thrive. Teaming among the many disciplines required to deliver a project was the focus of many discussions to include a recently released report by the USACE EIG on "Teamwork in the Project Management Business Process." This is a great report and highly recommended reading for all of our TEAM members.

As we enter the fourth quarter of the fiscal year, I encourage each of you to review your program schedules and work to maximize the execution of your Fiscal Year 1999 program. Part of "Engineering Excellence" is meeting our commitments to our clients.

At the end of July, the Corps will be losing an excellent engineer with the retirement of Mr. Philip M. Brown. Since my arrival in Washington, Phil has been my Deputy Chief of Engineering and Construction Division. He has handled the day-to-day management of the division. Phil will be missed here at headquarters by myself and by his co-workers. I know many of you from across the

CARL'S NOTES (CONTINUED)

Corps will also miss him because during my travels to other Corps offices I am always asked, "how is Phil doing?" Phil began his career in the Huntington District 41 years ago and came to the Headquarters in January 1974. He will be retiring to the Williamsburg area of Virginia. We wish him the best in his new found freedom!

DWIGHT'S NOTES

I just returned from the Project Delivery Team (PDT) conference in St. Paul at which Carl Enson and I gave our pitch (see attached article) on Engineering Excellence to approximately 300 attendees. My impression was that there was almost universal acceptance of our argument that the Corps must put renewed energy into creating the environment through which we can attract, develop, and retain top-notch technical people. I received a comment in a later breakout session, though, asking whether or not the Chief and the rest of HQ shared this view. The thrust of the discussion was that with all the attention being given to PMBP, Regional Business Centers and other issues recently, technical excellence seems to have taken a back seat.

I can't speak for the Chief or others in HQ, but my observations lead me to conclude the he and our other leaders here are squarely behind the Corps maintaining a highly professional cadre of talented technical people. I have lost track of the occasions when the Chief, the DCG's, and the SES's in the Pulaski Building have spoken in public and private about the need for the Corps to be ready and able to take on tough engineering challenges with a capable in-house workforce. The question is not whether or not we need in-house capability. Rather the questions are "What in-house capability do we need for the future?" and "How can we create a corporate culture, which embraces teamwork, equal opportunity, and customer focus?"

I was pleased with the teamwork celebrated in presentations at the PDT Conference. Each message reinforced the others regarding successes in this district and that district and in every functional area when it came to building the team and satisfying the customer. If we can sustain this momentum and build commitment with all our people we are squarely on the path of success. We are also making progress attracting and selecting technical leaders with diverse backgrounds, talents, and other credentials. What remains to be done, I believe, is to identify and shape the workforce of the future. The Workforce Development Focus Team of the HQ Strategic Management Board is working this issue. Regional Management Boards should also take this on. The new Registry of Consultants (RoC) and Registry of Skills (RoS) (see attached article) will give us a good snapshot of the talent we have today and serve as the baseline from which we can identify the gaps to fill for tomorrow's technical workforce.

Please don't wait for all the answers. You have the ability to reshape your in-house workforce to meet your immediate and near team requirements. Listen to your customers on what they expect of us and put your mind to selecting and developing talented people that can exceed these expectations. Give your people challenging work that they can't get elsewhere and reward them for it using all the tools available. Teach them to work in teams and take pride in what the team produces. We have Engineering Excellence in the Corps today. Keep it that way.

ARTICLES

THIS PUBLICATION WILL BE ISSUED ON A MONTHLY BASIS AND DISTRIBUTED BY E-MAIL AND POSTED ON THE INTERNET AT HTTP://WWW.HQ.USACE.ARMY.MIL/CEMP/C/CEMP-C.HTM AND HTTP://WWW.USACE.ARMY.MIL/INET/FUNCTIONS/CW/CECWE/NOTES. IF YOU WOULD LIKE TO CONTRIBUTE ARTICLES OR HAVE SUGGESTIONS FOR FUTURE ARTICLES, PLEASE CONTACT DENISE MASSIHI, CEMP-EC, 2020-761-1380 OR CHARLES PEARRE, CECW-EP, 202-761-4531.

Editors' Notes

SUBSCRIBE TO ECNEWS

With this issue of the Engineering and Construction News we have established a subscription list on the Corps List Server. The name of the list is LS-ECNEWS. The purpose of the list is to distribute the

Civil Works and Military Programs Engineering and Construction community newsletter, *Engineering and Construction News*.

All the names in address list for the June issue of the news were used to create the subscription list. You can subscribe or unsubscribe to LS-ECNEWS by sending an e-mail message to majordomo@usace.army.mil with no subject line and only a single line of text in the message body. That single line of text should have the following format: **subscribe ls-ecnews** or **unsubscribe ls-ecnews**. The List Server system will automatically pick up your originating e-mail address from the message and add it to or delete it from the distribution list.

If you have any questions about the list server, see the List Server E-Mail Delivery System web page at http://eml01.usace.army.mil/other/listserv.html. Or you may contact either Denise Massihi or Charles Pearre if you have additional questions on the subscription list.

POC: CHARLES PEARRE, CECW-EP, 202-761-4531

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Engineering Excellence

BUSINESS PLAN FOR MAINTAINING TECHNICAL EXCELLENCE

A business plan for maintaining technical excellence has been developed at HQUSACE. The next step in the process is to obtain approval for the plan from the Chief of Engineers and then furnish the plan to the field for implementation. The plan recommends specific strategies, which should be implemented with the evolving USACE business process to make the Corps vision our reality of the future.

Technical excellence is defined as a commitment to willingly give our best professional efforts in providing architectural, engineering, and scientific services to our clients and to society – and then to do it – and do it all the time.

The "USACE 2020 Bottom Line" does an outstanding job of defining where the Corps needs to be in the future. Essentially, the Corps should be the agency of choice for engineering and environmental solutions with strong in-house professional capabilities in engineering, project management, and research and development. The Corps should be the technical leader and problem solver, serving as the principal staff advisor for infrastructure policy throughout DOD while increasingly serving state and foreign governments in meeting their infrastructure needs. Inherent in this vision of the Corps is a strong commitment to professionalism and the technical excellence of our engineers, architects and scientist in service to the Army, DOD, the Nation and our other customers. If the Corps is to move toward the achievement of this vision, we must not only maintain but also continually update and enhance our technical capabilities.

To continue leadership for local and National infrastructure policy and to assist in the international arena, we must deliver products that are effective, economical and timely. Both our project customers and the general public want a quality solution that is on time and at reasonable cost.

The problems facing us are becoming more difficult and complex. New technologies are emerging at a rapid rate and there are complications due to regulatory constraints, congressional and executive mandates and interactions with other parties. Many of our customers are losing their own technical

capabilities and do not have sufficient expertise to define and evaluate many of their complex concerns and problems. The Corps must be able to provide the quality products and innovative solutions to our customers and the Nation that are not available to them from other sources. The decision making required to conceive, develop and implement such solutions will require many talents across a wide range of disciplines and experience. If we are to solve these problems and maintain and enhance our relevance to the Army, DOD and the Nation we must also maintain and enhance our technical capabilities and the technical excellence of our workforce. We must invest in our people.

To attract and keep the talented engineers, architects and scientists needed now and in the future, we must be able to provide exciting, challenging work adequate pay and working environment, and the opportunity to grow throughout their careers. The challenging work and the continuation of the reputation of delivering a quality product must offset the limitations of public service in the current economic climate. If the Corps is not viewed as providing products that are valued by our customers and society, then the workers who are our leaders in attaining excellence will leave for more satisfying employment. Without a vital, energetic and capable workforce, the Corps cannot provide the services and products expected by its clients, and its value to the Nation will decline. This declining spiral will continue until the Corps is unable to satisfy its current customers or to attract new clients.

With a vital, energetic and capable workforce, the Corps will not only produce it's historical services and products in a more timely and cost effective manner and with higher quality, but will lead in meeting the new challenges with innovative solutions. The key asset, which the Corps must have to focus on the problems facing the Army and our Nation, is a capable workforce fully committed to attaining technical excellence.

The business plan focuses on four basic goals needed to retain and enhance our technical capabilities to support the Project Management business process and our customers:

1) To recruit, develop and retain an experienced core of professional engineers, and scientists throughout the organization and who are fully qualified in all aspects of the planning, design, construction, operation and maintenance life cycle;

2) To have a flexible expedient and cost effective process for obtaining specialized expertise, as needed, to solve the customers problem, from both internal and external sources;

3) To have a flexible, expedient and cost effective process for obtaining, as needed, longer term expertise (5 to 10 years) in response to a customer's defined program needs; and

4) To form alliances with other government agencies, professional organizations and technical societies to lead in integrating technical, program and procurement strategies in solving the customers' problems.

The strategies for implementing these four basic goals will be integrated into our business process as follows:

1) The plan strategies will be sent to the USACE Division Regional Management Boards (RMB) for evaluation and execution throughout USACE on a regional basis. This approach will help to insure a corporate approach to the execution of the plan.

2) Monitoring and measurement of the strategies will be accomplished through the " Balanced Score Card " CMR at each Division. This will require the Division RMB to develop appropriate lagging and associated leading indicators for each strategy.

3) Overall progress associated with the Business Plan Strategies will be monitored in the HQ "CMR +" and the results presented to the USACE Corporate Board and Strategic Management Board on a periodic basis for Corporate discussions and strategic decisions as appropriate.

The goals of this plan will foster teamwork, corporate culture, and support our "Corps Plus" master strategy to revolutionize effectiveness, seek growth opportunities, and invest in people.

A more detailed discussion of the strategies will be included in the August issue of the Engineering and Construction News.

POC: DON DRESSLER, CECW-ET, 202-761-0220

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CORPS LOSSES A NATIONAL TREASURE

Os Keifer, one of the icons of past Engineering Excellence, passed away on 25 June. Os was born in Nebraska 13 September 1920, graduated from the University of Nebraska with a BS in Civil Engineering and immediately started his service to his country by entering the U.S. Army Corps of Engineers as a 2nd Lieutenant. After building airfields in England, Algeria, Tunisia, Sicily, Italy and Corsica during WWII, Os worked for the Bureau of Reclamation for nine years. Following a brief period as a farmer Os returned to the Corps in 1960, serving in many capacities from then until now.

Os was a dedicated Federal employee for 52 years; 39 of which were with us at the Corps of Engineers. Os' contributions to the Corps were both numerous and significant. He has been involved in the initiations and revisions of many Engineering Manuals, Technical Manuals, and Guide Specifications in the areas of concrete materials technology and airfield pavement design and construction. His contributions in these documents will be remembered for a long time, as they are widely used by our engineers in the design and construction of facilities worldwide.

Os was one of the best known experts in the U.S. as well as many other countries in the fields of airfield pavements and roller compacted concrete, and was constantly called upon by the personnel at Army and Air Force facilities to identify and solve their difficult airfield pavement problems.

Os received many awards within his lifetime. He was awarded Federal Employee of the year in 1989 and received a Silver de Fleury Medal in 1997 by the United States Army Engineer Regiment. These awards attest that his contributions and dedication were well recognized beyond the Corps of Engineers.

Os' passing is a great loss to the Corps of Engineers.

POC: M. K. LEE, CECW-EG, 202-761-1618

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RETIREMENT OF PHILIP M. BROWN, DEPUTY CHIEF, ENGINEERING AND CONSTRUCTION DIVISION, CIVIL WORKS

On 31 July 1999, Philip M. Brown will retire from Federal service after over 41 years with the U.S. Army Corps of Engineers. Philip started for the Huntington District as a Draftsman in July 1958. While working for the Huntington District, he attended Marshall University where he earned a bachelor's degree in Civil Engineering in May 1967. Mr. Brown was promoted from a Civil Engineering Technician to a Civil Engineer upon his graduation. He continued to work for the Huntington District until he transferred to Headquarters, Corps of Engineers, in January 1974.

Mr. Brown has been an advocate for Engineering Excellence during his entire career and especially during his time in Washington. Phil positions in Engineering and Construction Division included Assistant Chief of one of the regional sections in General Engineering Branch, Regional Section Chief, sub-program manager the CP&E, AE&D, and Dam Safety Assurance Programs. In 1993, Mr. Brown served as Assistant Director of the Central Region, Directorate of Civil Works, which included the time of the Great Flood of 1993 that generated numerous Congressional inquiries and special briefings.

Since 1997, Phil has served as Deputy Chief of Engineering and Construction Division. In this position he assumed a major role in managing and supervising the division. As Deputy Chief, he has been steadfast in supporting Engineering Excellence at all levels of the Corps.

A retirement luncheon for Mr. Brown has been scheduled for 1130 hours on Thursday, 29 July 1999 at Pier 7 Restaurant on the Washington waterfront. If you are going to be in the Washington area on 29 July 1999, please join us in honoring Phil. The cost of the luncheon is $22.00. Luncheon reservations can be made by calling Vickie Lay at (202) 761-4538 or Esther Brooks at (202) 761-4529. A flyer concerning the luncheon is on the Internet at http://www.usace.army.mil/inet/functions/cw/cecwe/phil/.

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TERRY HOUGHTON RETIRES FROM THE CORPS AFTER 34 YEARS

Terry Houghton, Chief, Electrical Engineer of Military Programs at HQUSACE, retired in June. Terry began his career with the U.S. Army Corps of Engineers in May 1965. During his illustrious career he worked at the Savannah, Seattle, and Alaska Districts, and Middle East Division before coming to HQUSACE. Terry served as the Corps senior technical expert, staff advisor, consultant and liaison in all facets of Electrical Engineering and provided technical oversight and operational control of technical centers of expertise, and electrical research and development issues and PROSPECT training course.

All those that worked with him over the past 34 years will miss Terry's leadership and guidance.

POC: RAY NAVIDI, CEMP-ET, 202-761-0223

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REGISTRY OF CONSULTANTS (ROC) BEING EXPANDED

In response to repeated requests from MSC's and districts, we will be expanding the RoC to include a "yellow pages" of skills. The new database will primarily be a listing of journeyman level team members throughout the Corps along with a brief description about their experience and skills. The

new database will be a vehicle for searching and identifying people with appropriate qualifications for independent review, design teams, emergency operations, deployments, etc. Participation will be on a voluntary basis and being registered will not mean automatic assignments.

POC: RAY NAVIDI, CEMP-ET, 202-761-0223

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TELESCOPING WEIRS FOR DECANTATION OF WATER FROM DREDGED MATERIAL CONTAINMENT FACILITIES

The telescoping weir was conceived and developed by Jack Fowler, Ronald G. Vann, and T.D. Woodward during a joint research effort by the Waterways Experimental Station and funded by the Norfolk District Corps of Engineers. The concept was placed on mechanical drawings in 1986, a prototype model was constructed at WES in 1992, and the first full size prototype telescoping weir was constructed and installed at Craney Island Confined Dredged Material Facility (CDF) in 1996.

The telescoping weir is an innovative structure that has the ability to closely control the environmental water quality during decantation and drainage of water from the dredged material surface of CDF's. The telescoping weir consists of a set of vertically nested cylinders set on end with one cylinder within the other. The bottom cylinder is fixed to a foundation that is anchored to the bottom of the CDF and connected to a discharge pipe. The upper cylinders are extended in a telescoping manner to position the rim of the top cylinder to any desired elevation below or above the water surface. As the cylinders are lowered below the water surface the decant water flows over the weir crest into the interior sections and exits through the discharge pipe in the lower section and returns to the nearby waterway.

The telescoping weir is set within and attached to the base of a reaction frame that provides support for it and the machinery that controls the telescoping movements of the weir. The telescoping weir is raised and lowered by a set of mechanical screw jacks that operate simultaneously either manually or by solar/battery-powered motor. The design can meet a range of water and dredged material storage levels common to most CDF's. The design life of a 12-foot telescoping weir is ten to fifteen years depending on the rate of filling and consolidation. At the end of the first-term use, the telescoping weir also has potential to be rebuilt and reused.

Conventional weirs have numerous operational disadvantages. One major disadvantage is simply not being able to place or remove the weir boards at the proper time for optimum management of the effluent. The boards' dimensions do not match the required depth of withdrawal and very often the boards leak at the joints. The weirs can present a safety hazard for someone slipping and falling into the weir during removal and placement of the weir boards. Also, it is very difficult to ensure all weir boards are level and at the same elevation, therefore, often 100 percent of the available weir crest is not used. Floating debris at the weir crest causes large withdrawal velocities at greater depths below the weir crest when debris is not prevented from collecting on the weir crest. The weirs also provide a good habitat for snakes, spiders, and wasps.

The innovative telescoping weir has numerous advantages. The principle advantage is being able to provide an infinite elevation adjustment of the weir crest (within the weirs design height) and discharge velocities at the touch of a button. The total crest of the telescoping weirs remain at the same level at all times, therefore, 100 percent of the crest is utilized throughout its use. More efficient, frequent and friendly use of the telescoping weirs will increase the storage capacity and longevity of CDF's, thus extending the life of a very valuable and expensive storage facility for dredged material containment. The crest of the telescoping weir can easily be lowered to the bottom of the desiccation cracks in the dredged material. This also provides efficient control of surface run-off and enhancement of the desiccation and the drying process. This provides some measure of mosquito control. The telescoping weir reduces labor and cost requirements through the elimination of weir board handling, weir board costs, weir maintenance, and possible weir failure. This greatly provides improved safety, which is another significant advantage. The telescoping weir can also be equipped with a variety of sensors to measure effluent turbidity, temperature, pH, and biological oxygen demand. If the quality of the discharge effluent were unacceptable, the weir crest would automatically rise to control or stop the discharge. Optional remote readouts and control capability could be used to enable several weirs to be monitored and adjusted from a remote location through a telephone and computer link. The telescoping weir clearly is the best operational device and method to control effluent run-off and management of CDF's. Most significantly, this device and new technology offers a new standard in an area of dredging management that has been very difficult to improve upon for many years.

To date, three full size telescoping weirs have been installed at the Craney Island CDF in Norfolk, Virginia. The first full size prototype-telescoping weir was installed in April 1996, the second was installed in June 1998 and the third was installed in April of 1999. The first telescoping weir performed so well, along with two conventional weirs, that the District was able to accommodate a record annual placement of six million cubic yards of maintenance dredged material. Efficient performance of the telescoping weir prevented temporary shutdowns of two very large dredging projects. The first two telescoping weirs have been fully operational and have required zero maintenance to date.

Presently, the Norfolk District is in the process of helping Mobile District to install their first telescoping weir. This work should be accomplished by fall this year. The innovative devise has high potential to be used throughout the Corps of Engineers, other industrial facilities, and worldwide. Patents for the telescoping weir are being processed with the U.S. Patent Agency and with other foreign countries.

The Dredging Operations and Environmental Research (DOER) Program at WES supports the Corps-wide Operation and Maintenance Program. The telescoping weir is being studied, evaluated, monitored under the DOER innovative technology focus area. This work should further promote the use and will aid in the technology transfer to other interested Districts.

POC: T. D. WOODWARD, CENAO-EN-C, 757-441-7125

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SPECIFICATIONS ENGINEERING

"Specifications Engineering" is a professional function in the project design process.

DISCUSSION: - The Construction Specification Institute (CSI) "Specifications Competition Committee" reports a pronounced and steady decrease in the number and quality of project manuals being submitted for award competition. It seems the trend of large AE firms is to abolish positions

held by qualified engineers responsible for overall control of project manual development. AE firms using subcontractor Architect or Engineering firms are requiring those firms to prepare specification sections within their contracted area of responsibility. The general contractor AE firm exercises little or no control over the preparation of the sections by the individual subcontractors and fails to coordinate specifications prepared by the various disciplines or to assure that specifications are consistent with the contract clauses and Division 1 General Requirements. Smaller AE firms often have clerical staff work directly with the individual designers in preparing the project manual. Rarely is a registered Architect or Engineer responsible to work with individual designers and control preparation of the project manual.

The trend toward eliminating the registered professional as the controlling person in the preparation of the project manual is resulting in poor quality project manuals. Poor quality project manuals lead to higher project cost - it is more difficult for suppliers, subcontractors, and prime contractors to prepare their bids; bids are higher; contract administration costs are increased; and there are more modifications during construction.

To reverse this trend, the industry and USACE should recognize *"Specifications Engineering"* as a separate professional function. Having a registered professional in charge of the preparation of project manuals would improve construction specifications, and help to address the problems described above.

Definitions:

Specifications Engineering is the professional discipline of engineering and architecture having the oversight and control of the preparation of the project manual for a construction project.

Designer - The term used herein as the person (architectural, structural, mechanical and electrical) who establishes the technical qualities of products or technical characteristics for certain features of a project.

Functions of the Specifications Engineer:

The Specifications Engineer must be involved in all phases of a project, from planning, design, bidding, construction, and through post-construction. The Specifications Engineer is the responsible expert in the area of construction contract documents. The Specifications Engineer's major involvement is the development of the project manual during the projects final design phase. During planning and design development phases, the Specifications Engineer serves as a resource to identify and assist in resolving unusual construction contracting problems. The Specifications Engineer is primary responsible for the overall quality of the project manual.

The Specifications Engineer is a registered Architect or Engineer with additional qualifications of being a Constructions Specifications Institute Certified Construction Specifier.

The Specifications Engineer must be thoroughly familiar bidding procedures and the relationship of 00 Documents to the other contract documents. The Specifications Engineer must have general knowledge of requirements of technical sections of Division 1-16 of the construction specifications and be thoroughly familiar with contract administration problems during the construction phase of a project. If computer programs are used in the development of the project manual, the Specifications Engineer must be thoroughly familiar with the use and limitations of those systems.

Preparation of Project Manuals: General Requirements - Project manuals are developed under direction of the Specifications Engineer who ensures high-quality specifications meet the construction administrators concerns and project specifications comply with industry standards in format and content established by the Construction Specifications Institute (CSI) Manual of Practice. Project specifications when combined with project drawings provide a complete and comprehensive set of contract design documents that can be bid or negotiated fairly and can be executed little or no change.

Specification Engineer/designer relationship: The Specifications Engineer and designers must work closely to produce a quality project manual. (Note: The designer need not be different from Specifications Engineer in all situations. The Specifications Engineer may also be the designer for certain technical features of a project.) Designers are responsible for technical qualities and characteristics of the project features, and the Specifications Engineer working with the designer is responsible for the technical accuracy of the specified requirements.

POC: CHARLIE BALDI, CECW-EP, 202-761-8894

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GS-800 ENGINEERING AND ARCHITECTURE JOB FAMILY CLASSIFICATION STANDARDS REVIEW

In late May, the Policy and Program Development Division of the Department of the Army (DA) initiated a fact-finding exercise of the GS-800 series. The main objective of the exercise is to develop a new standard which will simplify the classification process for classification specialists and for managers and others who are not human resource professionals but have agency delegated classification authority. Another objective is to update the standards content in order to reduce the level of resources that will be needed for future maintenance. Many of the existing standards were written in the 1960's and do not reflect changes, which have occurred in technology and the way work is now accomplished. To support this effort, DA has requested the Corps forward samples of current approved position descriptions and evaluation statements that illustrate the various kinds and levels of positions in the occupations. The Director of Human Resources, HQUSACE, provided the following comments and recommendations as part of their response to DA:

a) The current classification standards for the GS-800 group do not include any point weight for knowledge in automation systems.
b) The current GS-800 series positions do not include some new trades such as cost engineering, interior design and industrial hygiene.
c) Recommend development of two standards, one for professional positions and one for non-professional positions.

HQUSACE has designated the following Divisions and Districts to assist in developing and reviewing the draft standard in support of DA's initiative: Northwestern Division, Portland District, Seattle District, Great Lakes and Ohio River Division, Louisville District, Huntington District, South Atlantic Division, and Baltimore District. The HQUSACE point of contact for this action is Millie Edwards.

POC: LARRY BROTHERTON, CELRD-ET-EW, 513-684-6899

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Update

SARDA BECOMES SAALT

Remember "SARDA" – the *Assistant Secretary of the Army for Research, Development, and Acquisition*? They were the HQ Department of the Army office that handled contracting matters in the Pentagon. There also used to be an *Assistant Secretary of the Army for Installation, Logistics and Environment* or "SAILE" in bureaucratese. Well, no more.

In February of this year, the Secretary of the Army announced the transfer of the logistics mission to SARDA, and SARDA is now the Office of the *Assistant Secretary of the Army for Acquisition, Logistics, and Technology* (ASA(ALT)) and the former ASA(ILE) is now the Office of the *Assistant Secretary of the Army for Installations and Environment* (ASA(IE)). Not earthshaking, but good to know if you're looking for an office that no longer exists.

POC: JAMES V LOVO, CEMP-EC, 202-761-4804

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MILITARY REAL PROPERTY TRANSFERS BECOME REAL IMPORTANT

Audits of real property that will take place this fall. The US Army Audit Agency has already started efforts to audit the Army's real property databases, policies, procedures and practices, and will perform the main effort this fall. So what does that mean to District project delivery team members?

Remember that design and construction folks have specific duties regarding their support of real property accounting. First, a quality (i.e., complete and accurate) *draft DD Form 1354* should be a standard part of the design documents produced by the district for military projects and reviewed/accepted by the customer during the design review process. This draft DD 1354 then needs to be provided to the construction members of the team for use during the construction phase. During construction, contract changes that impact the real property accounting need to be reflected in changes to the DD 1354. At the joint turnover inspection, punch list items are added to the DD 1354, and the DD 1354 is to be signed by the USACE representative as the constructing agent and by the DPW/BCE rep as the accepting agent.

These joint signatures on this *initial DD 1354* should occur BEFORE the user is provided the keys and allowed to occupy the facility. Prior to transfer, the financial value of the project is carried as *Construction in Progress* (CIP) in USACE's financial system. This jointly signed initial DD 1354 allows two important actions to occur: first, the District can initiate action to remove the CIP amount from USACE's financial accounts; secondly, the installation can initiate action to add the amount of the capital improvement to its general ledger accounts. After financial closeout, financial aspects of the DD 1354 are updated and a *final* DD 1354 is prepared and provided to the installation for their real property accounting. Not that hard --unless you are not doing it.

So, why is the Army auditing its real property accounting? Well, this is part of the requirements for compliance with the *Chief Financial Officers Act*, or CFO. Specific objectives of the audit are:

- *Determine if internal controls are in place to ensure that the Army's real property databases are updated accurately and in a timely manner for additions, deletion, and modifications.*

- *Determine if internal controls are in place to ensure that completed real property projects are properly moved in a timely, accurate manner from the CIP account to the real property accounts*

- *Determine if the Army is in compliance with the regulations for maintaining the real property databases.*

- *Assess the adequacy of Army's management control program for maintaining the real property databases.*

The U.S. Army Audit Agency will perform audit work at a variety of locations throughout the Army during July-December 1999. Let's make sure each part of the project delivery team provides the support needed by the Army to pass this piece of the CFO test!

POC: JAMES V LOVO, CEMP-EC, 202-761-4804

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NEW SIZE STANDARD FOR A-E SERVICES

On 14 May 1999, the Small Business Administration (SBA) published a final rule revising the small business size standard for A-E services The rule, which was effective 14 June 1999, establishes a new higher size standard of $4.0 million in average annual receipts for general engineering services (part of Standard Industrial Classification (SIC) code 8711), architectural services (SIC code 8712), surveying services (SIC code 8713), and mapping services (part of SIC code 7389). The previous standards, which were in effect since 1986, were $2.5 million for engineering, architecture and surveying, and $3.5 million for mapping. The $4.0 million standard reflects a reasonable inflationary increase. Fortunately, SBA did not adopt different size standards for each discipline as initially proposed, which would have been very problematic in practice.

The higher threshold will obviously increase the number of A-E firms, which qualify as small businesses. With a larger competitive pool of small business firms, the opportunities for small business A-E set-asides will increase. Also, more firms will be able to qualify for SBA's loan programs.

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CHANGES IN A-E PERFORMANCE EVALUATION FORM

DD Form 2631, the DOD A-E performance evaluation form, was recently revised as a result of a HQUSACE proposal. The revised April 1999 edition of the form can be viewed at http://www.acq.osd.mil/dp/dars/dfars/html/dd2631.pdf. The changes from the November 1992 edition are as follows:

Block 12: Overall ratings changed to match the terms used in DOD for performance evaluations for other types of contracts. Specifically: Excellent becomes Exceptional; Above Average becomes Very Good; Average becomes Satisfactory; Below Average becomes Marginal; and, Poor becomes Unsatisfactory.

Block 16a: Added the following disciplines: Chemistry, Risk Assessment, Safety/Occupational Health, and Hydrographic Surveying. Changed Surveying and Mapping to Surveying, Mapping and Geospatial Information Services.

Block 17: Changed the attribute Thoroughness of Site Investigation to Thoroughness of Site Investigation/Field Analysis. Add two new attributes: Innovative Approaches/Technologies and Implementation of Small Business Subcontracting Plan.

Blocks 16a, 17 and 19: Uses five discipline/attribute rating levels, instead of three, corresponding to the overall rating levels in Block 12.

The changes to the form are being incorporated into the ACASS Internet site and completion is expected by December 1999. Until the changes are made, the previous version of the DD 2631 will be used.

POC's: Don Evick, CEMP-EC, 202-761-1053
Donna Smigel, CEMP-EE, 202-761-0336

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Dam Safety

MSC Dam Safety Coordinators Meeting

A MSC Dam Safety Coordinators Meeting has been scheduled for 28-29 July 1999 in Room 1225, Pulaski Building, Washington, DC.

The purposes of the meeting are as follows:

Review the actions taken by ICODS during FY1999;
Preview ICODS plans for FY2000;
Discussion of changes to periodic inspection reporting
Review of changes in the Army Installation Dam Safety Program;
Prioritization of budget submissions for FY2001; and
Discussion of pending changes in the Dam Safety Assurance Program.

The meeting will start at 1300 on Wednesday, 28 July and conclude by 1100 on Thursday, 29 July. The meeting is scheduled for MSC coordinators; however, if you desire to bring one or more of your District Dam Safety Coordinators with you, you may do so. Please let us know who will be attending NLT 22 July 1999 since the meeting room has limited space.

POC: Charles Pearre, CECW-EP, 202-761-4531

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Technical

Automated System of Monitoring the Old River Control Project

The Old River Control Project was authorized by the Flood Control Act of 1954 to prevent the Mississippi River from changing course. The Old River Control Project, possibly the most important civil works project in North America, maintains a distribution of flow between the lower Mississippi River and Atchafalaya River. That distribution was determined to be approximately 30 percent of the total latitude flow (combined flow in the Red River and Mississippi River above the control structures) passing down the Atchafalaya River on an annual basis. The project was completed in 1961 and consisted of the Low Sill Control Structure, an Overbank Control Structure, a Navigation Lock and a

Closure Dam. During the 1973 Flood on the Mississippi River, the Low Sill Control Structure was severely damaged. Consequently, the allowable differential head on this structure was reduced from 35 ft to 22 ft due to a scour hole that resulted in the undermining of the structure's foundation. Soon after this flood, the decision was made to build an Auxiliary Control Structure to increase the safety and flexibility of the project. This project was completed in 1986.

In 1990 a privately owned hydroelectric power plant was completed and now operates in conjunction with the Old River Control Project to maintain the 30/70 distribution. Certain events, usually lightning striking the electrical distribution system, will cause the plant to have a load rejection, resulting in the plant shutting down and the accompanying loss of flow diversion. If the loss of flow is not compensated for immediately, the differential head on the damaged Low Sill Control Structure will exceed the allowable differential head. The Corps uses the Auxiliary Control Structure to compensate for a loss of flow due to this unscheduled shutdown of the hydroelectric power plant. The Auxiliary Control Structure has six 62-ft wide and 75-ft high tainter gates that can be operated quickly.

Because the communication between the Old River Control Structures and the hydroelectric power plant is extremely critical, we have installed computers and video monitors to ensure that operators at either site can monitor the hydraulic conditions of all structures. The data is displayed in real time (fiber optic cable is used because of the bandwidth) and includes critical river and channel stages, flows, and gate openings. This is critical for the operators to make an informed decision. The video monitors are to ensure that the Auxiliary Control Structure channels are clear before opening the gates. Additional information displayed on the monitor includes annunicators showing the condition of the backup generators and entry detection alarms.

Additional capabilities that exist or are under development for the computer monitoring system, includes the ability to calculate gate operations to maintain a constant 30/70 distribution, determine relative sediment concentration, and enable remote operation of the structure. In addition, a comparative plot program has been developed to evaluate hydrographic surveys, and a web page is being considered so that recreational and commercial fisherman may access gage readings and flow distribution information as it effects fishing conditions in and around the Old River Control Structure Project.

POC: CARY MCNAMARA, CEMVN-OD-JR, 215-492-2162

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COMPARISON OF WELDED WIRE AND TWISTED HEXAGONAL MESH GABION BASKETS

The Philadelphia District maintains the Cape May Canal as part of the New Jersey Intracoastal Waterway. The navigation channel links the Atlantic Ocean at Cold Spring Inlet in Cape May, New Jersey with the Delaware Bay at the southern tip of New Jersey. The canal is approximately 3.5 miles in length. The authorized channel depth is 10 feet local mean low water; the tidal range is approximately 5 feet, in a saltwater environment. The presence of tidal currents and ship-generated waves in the navigation channel has resulted in erosion of both shorelines along the canal. The primary method of erosion protection used by the District on the canal has been gabion basket revetments. The first section of gabion revetment was constructed along the canal in 1982.

Historically, the Philadelphia District has specified gabion basket materials to be twisted hexagonal mesh, primarily because of the lack of availability of alternate gabion material types, and due to the district's familiarity with the use and performance of this type of gabion basket material. However, due to the fact that the use and availability of welded wire gabion baskets has continued to increase

industry wide, the District, in cooperation with North Atlantic Division and funded by HQUSACE, initiated a study comparing the two types of baskets.

In 1996 the District awarded a contract to construct 705 meters (2300 feet) of gabion revetment using both twisted and welded wire gabions, which was completed in July 1997. The photograph on the left shows the pre-construction condition of the area. The project, "Cape May Canal Bank Stabilization, Section V", provided an opportunity to complete an in-situ comparison of twisted hexagonal mesh and welded wire mesh gabion baskets in a typically harsh and dynamic environment.

The contractor for the project was Trevcon Incorporated, of Liberty Corner, New Jersey. The contract drawings and specifications for this project originally required the contractor to complete the gabion revetment using either twisted wire or welded wire gabions. It was later decided that the project was ideal to effect a comparison of the two types of gabions. Consequently, the project was amended to require the Contractor to construct approximately one half of the total length of the revetment with one type of gabion and half of the revetment with the other. Since both types would be constructed at the same location and by the same contractor, certain variables in comparing the two types would be minimized (but not eliminated), such as site conditions, installation methods, gabion rock, and contractor's quality of work.

Interface of the welded wire mesh gabion baskets (on left) with the twisted wire mesh gabion baskets (on right); located approximately midway along the total length of the project..

The purpose of the study is to provide a report documenting the different aspects of installation and construction methods, and the performance of welded wire mesh versus twisted hexagonal mesh gabion basket revetments over a 3-year inspection period. Suitable recommendations based on the experiences the District has had during the project and inspection period will be made. This document will provide a practical "lessons learned" perspective and may be of help for those interested in specifying or administering contracts with one or the other type of product. The latest guide specification section (currently under revision by HQUSACE) to include welded wire gabions will also be included.

The installation of both types of gabion baskets was monitored periodically during construction. The condition of the gabion revetment is scheduled to be monitored for a period of three years following the completion of project construction. The first year's scheduled quarterly inspections, the second year's first biannual inspection and resulting assessment has been completed, as well as a preliminary report. For the next year and a half three more biannual inspections are scheduled. Revisions will be made to the report annually to document the performance of both types of gabions observed during the

inspections. The final assessment and report should be completed sometime in the 2nd quarter of FY 2001.

POC: GIGI GEISSELE, CENAP-EN-DC, 215-656-6655

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DESICCANT COOLING TECHNOLOGY RESOURCE GUIDE

Desiccant cooling systems remove moisture from the air to control humidity levels in conditioned air space. Desiccant systems work in conjunction with conventional air conditioning systems to dehumidify the air. Most people are familiar with desiccants such as silica gel packages that are included with new electronics or textile products. Desiccants can be in the form of solid or liquid. They are selected based on (1) ability to hold large quantities of water, (2) cost, and (3) ability to be regenerated.

Many Army and DOD facilities, especially those located in the Southeastern U.S., have a latent portion of the cooling load, which exceeds 50% of the total cooling load. This situation is even more pronounced during the early part of the cooling season when there is little sensible load present. With a light cooling load, the facilities' chillers will cycle frequently and cool the air to near saturation before it is delivered to the space. This results in discomfort to the occupants and also presents potential microorganism growth inside the duct.

CERL developed a resource guide for desiccant cooling technology in Adobe Acrobat portable document format (.pdf) for inclusion on the Construction Criteria Base (CCB), maintained by the National Institute for Building Standards (NIBS). It is an easy-to-use reference source for investigating, evaluating and installing desiccant cooling technologies. The guide provides an overview of desiccant cooling technology and provides readers with reference materials for more in-depth analysis. The guide also incorporates results from the DOD Desiccant Cooling Demonstration Program. The field demonstrations have been conducted for facilities including an Army barracks, a museum, a hospital operating room, an avionics repair laboratory, and a bowling ally.

POC's are Frank Holcomb (CERL) and Joe McCarty (CEMP) for the CCB, Daniel Melamed for NIBS, and Chang Sohn (CERL) for Desiccant Cooling Technology in general. The resource guide will be available on the CCB in the near future; if you would like to obtain a CD with the resource guide please contact Frank Holcomb at 217-352-6511, x7412.

POC: JOE MCCARTY, CEMP-ET, 202-761-8619

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GROUND-SOURCE HEAT PUMPS

The use of ground-source heat pumps (where the earth is the heat source/sink) for cooling and heating buildings is increasing in the private sector as well as at military installations. A recently completed study by the Institute for Defense Analyses indicates that almost a million tons of existing air conditioning systems within DOD could be replaced by ground-source heat pumps with a payback of 10 years or less. Low maintenance costs and the use of "free" energy for the heat source/sink contribute to the favorable economics. Because ground-source heat pump systems are very flexible in design they can easily be integrated into both new and existing structures. The heat pumps are indoor units containing a compressor, water-to-refrigerant coil and a refrigerant-to-air-coil. The water-to-refrigerant coil is supplied with water circulated from the outdoor source, most often pipes buried in

the ground. The heat pump terminal units are individually controlled, each serving its own zone. This provides excellent temperature regulation with relatively simple controls.

Ground-source heat pumps should be considered as an alternative in the energy and life cycle cost evaluations of new facilities and facilities being upgraded. Energy Savings Performance Contractors who are proposing projects on Army installations should also consider the ground-source heat pump alternative. For assistance Corps POC's include Messrs. Joe McCarty, Dale Otterness from CEMP-ET and Gary Phetteplace at CECRL.

POC: DALE OTTERNESS, CEMP-ET, 202-761-8621

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Information

GREAT LAKES AND OHIO RIVER 1998 CONSTRUCTION REPRESENTATIVE OF THE YEAR

Francis H. (Hammer) Haynes brings his integrity, teamwork skills, technical skills, and positive attitude to every assignment. Whether Hammer is in an office engineer role or in a soil and material lab or any position in a field office, he consistently excels. Especially noteworthy is Mr. Haynes' work in completing Phases I and II of the Williamsburg, KY, Local Flood Protection Project. His personal attention to the construction effort as well as the concerns of the citizens and local sponsor made this project very successful. Demonstrated during this project was his skillful coordination of the utility work throughout the downtown streets. The Mayor was especially complimentary of Mr. Haynes efforts in minimizing any disruption to the public, which further exemplifies the best in effective partnering. Mr. Haynes inspires and motivates those with whom he works and readily offers to help anyone and serves as a mentor for many. Mr. Haynes is the outstanding Construction Representative in the Great Lakes and Ohio River Division.

POC: JOHN HART, CELRD-ET, 513-684-3803

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"QUAD CITIES" SPEEDS COMPLETION OF INNER HARBOR NAVIGATION CANAL LOCK DEWATERING

The dewatering and major repairs of Inner Harbor Navigation Canal Lock were completed by the New Orleans District on September 23, 1998 two days ahead of the 60-day scheduled time frame. Major components of the $6,000,000 repair project included the following:

(1) Rebuilding the upper gate hinge anchorages,
(2) Replacement of all wearing surface parts in the upper and lower hinges,
(3) Replacement of valve frames and guides,
(4) Refurbishment of the four main filling and emptying valves,
(5) Replacement of the gate clapping quoin and miter seals, and
(6) Repairs to six miter gates.

The New Orleans District used a combination of in-house, contract, and other Corps districts' resources and worked around the clock to expedite completion of the project.

Of particular note was the use of the heavy lift, floating crane, “Quad Cities”, which was borrowed from Rock Island District. The 350-ton floating derrick was used to lift six of the lock miter gates on to, and later off of barges where New Orleans District personnel repaired them. The lock gates weigh

in at approximately 280 tons each, far exceeding the lifting capacity of any New Orleans District plant. The "Quad Cities" was dispatched to New Orleans complete with its crew and remained on the job for approximately 30 days at the commencement of the job. Once the lock gates were reinstalled in the lock the "Quad Cities" was released and returned to Rock Island. Using the "Quad Cities" saved $127,000 on the project as compared to using a contract crane. This strategy of sharing resources demonstrates the corporate business culture that is evolving within the Mississippi Valley Division and promises to build on the concept of CEMVD as a single business entity.

POC: MIKE PARK, CEMVN-OD-T, 504-862-2302

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CAREERS IN CONSTRUCTION BROADCAST

On October 26, 1999 at 11:00AM EST, the National Center for Construction Education and Research (NCCER) will broadcast by satellite the third annual Careers in Construction program, *Build Your Future '99.* This program will encourage young people to choose a career in construction. The program will visit construction projects, talk about earning potential and career opportunities, and discuss some of the latest construction technology. The program will explain step-by-step how to begin a career in construction.

We encourage our division and district offices as well as our laboratories to participate by sponsoring the viewing of this program to local high school(s), especially schools that we have been adopted as part of the government-wide Adopt-a-School Program. The NCCER recommends that students, parents and faculty be invited to view the program, that a suitable viewing room with large television screen is arranged, and that a construction panel be established to answer questions. Brochures containing program information, registration form, as well as technical information for making the satellite connection is being sent out to our Corps offices. The satellite connection will require a steerable satellite (KU Band) dish. The NCCER point of contact for this program is Amy Bennett at (353) 334-0911.

POC: ROBERT DIANGELO, CEMP-ET, 202-761-4803

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GREENVILLE CREW REPOWERS BANK GRADER 4919 FOR NEW MILLENNIUM

The year is 1949. In Washington, President Harry S. Truman appoints Lt. Gen. Lewis A. Pick as the new Chief of Engineers. The Hoover Commission's attempt to confine the Corps to military activity by merging flood control work under the Interior Department is defeated.

In West Memphis, Ark., Civil Engineer Guy Hurley will soon become the next assistant chief of the Memphis District's Operations Division. And in Milwaukee, the Bucyrus Erie Company completes production of their 19th barge-mounted crane-dragline, Bank Grader 4919.

Now, 50 years later, the Memphis District's Greenville Engineer Yard in Mississippi is using the latest technology to repower Bank Protection Party No. 11's vintage Bank Grader 4919 for continued service into the new millennium. Re-powering meant completely removing all existing equipment inside the grader's cab, with the exception of the main hoist and drag system and the swing motors, said Kel Shurden, chief of Greenville Engineer Yard.

"This undertaking was a monumental task," said Shurden. "It involved the marriage of new equipment into a 50-year-old grader superstructure." Time was their biggest challenge, said Shurden. They

couldn't start the work until the grader came off the river in late November 1998. They had to finish before July when the 1999 revetment season begins. Revetment work helps stop erosion and stabilizes the riverbank. "When the bank erodes, the channel gets wider," said BPP #11 Chief Charles V. Cates. "The wider it gets, the shallower it gets. So, our revetment work keeps the channel open for shipping."

Actual work to upgrade grader began in January, with the installation of state-of-the-art electrical equipment, said Shurden. Workers also fabricated and installed many new mechanical piping systems. Several structural modifications were necessary to accommodate the new equipment, according to Shurden. This involved fabricating and installing new diesel fuel and lube oil tanks with associated piping systems, ventilation ductwork, and roof-mounting the remote radiator for the generator engine cooling system and several electrical components.

"This was not an easy task," said Shurden. "Some of this equipment had to be mounted some 30 to 40 feet above the main deck of the barge itself." Before installing any new equipment, all of the existing lead-based paint had to be removed, mechanically and by hand, prior to re-painting, said Shurden. With safety uppermost in mind, measures were taken to protect the health and safety of the employees involved, as well as environmental concerns when dealing with this type of hazardous material.

Mechanics Julius Mancini, Julian Permenter and Fred Wright from BPP #11 chipped and scraped away the old paint. Then BPP #9 Mechanics Alvin Henyard, Willie Yearby and Earnest Tolliver, BPP #9 welder David Montgomery and BPP #11 Winchman Jerome Jones followed with the new paint. In addition to wearing respirators and personal protective equipment, these men underwent blood tests, before and after, to check for levels of lead and toxic substances, said Shurden. BPP #11 Crane Operator Robert Wiley completed most of the machine and drilling work on the foundation for the generator, and most of the crane work. Then the Greenville crew installed a new electrical generator and a new motor control for the hoist and drag system.

Johnny Ard stands atop Bank Grader 4919 at the Greenville Engineer Yard as a crane lowers steel piping. The piping will be used to fabricate safety rails around the top of the grader cab

The existing hoist and drag motor was rewound and reinstalled. They removed the deck winch controls, deck winch motors and swing motor controls from BPP #8's old mooring barge and installed them aboard the grader. "We saved the government over $600,000 by not having to buy new equipment for these systems," said Shurden.

Welder Johnny Ard, Crane Operator Carl Hammitte and Supervisor Mack Shorter, all from BPP #11, had one of the hardest and dirtiest jobs. But it was a job that ensured the safety of present and future workers. They mounted safety rails around the muffler and radiator on the grader cab roof and around the generator inside the grader cab, according to Shurden. "Once we got all the equipment mounted, it took about two months to pull the electrical cable to all of that equipment," said Shurden. Electricians Kevin Wuestenhoefer (BPP #11) and Avery Jones (BPP #9) were assisted by Jerome Jones, Hammitte and BPP #11 Winchman Henry Canon. As the re-powering project foreman, BPP #11 Engineer Equipment

Mechanic Foreman Walter Fuquay oversaw all of the work. In spite of the late delivery of the generator, all work was accomplished in plenty of time to allow suppliers time for start-up of their equipment prior to BPP #11's ship-up date.

"All of the employees exhibited the highest degree of teamwork," said Shurden. "Their diligence, perseverance and dedication to achieving a quality product, on time and within budget, were major factors in the successful accomplishment of this project." Thanks to the skilled work performed by the Greenville Engineer Yard team, a repowered Bank Grader 4919 will meet the challenges of the new millennium.

POC: DAVE CASH, CEMVM-CO, 901-544-0729

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Value Engineering

CUSTOMERS ADVERTISE CORPS VALUE ENGINEERING (VE) SUCCESSES

Presentations by the **U.S. Department of Energy** and the **U.S. Department of State** featured work by Corps VE Professionals at the Federal Construction Value Engineering Conference in San Antonio, 1 July 1999. Both offered **kudos to the Corps** for excellent work for their agencies. While **praise from customers** is the best possible affirmation of excellence, Corps VE professionals offered even more possibilities to the audience through the following presentations:

Mr. Bruce Munholand, **Alaska District, Pacific Ocean Division**, showed how a VE/Charette process might be used by Customers (such as Department of State) to focus design and resolve problems early in the design process.

Mr. Frank Vicidomina, **New Orleans District, Mississippi Valley Division**, explained how the use of VE in the **Section 22 Program** pleases customers, while expanding Corps & A/E work possibilities.

Ms. Leslie Bush, **Chicago District, Great Lakes and Ohio River Division**, strongly demonstrated the District's ongoing extra efforts to please a non-Federal customer. The District Commander's use of VE is ensuring that the **City of Chicago** realizes that its wishes have been heard, and that the Corps is doing everything possible to ensure a cost-effective, technically sound project.

POC: MICHAEL HOLT, CEMP-EV, 202-761-8738

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Meetings and Conferences

GEOTECHNICAL AND MATERIALS ENGINEERING CONFERENCE

The 1999 Corps of Engineers Geotechnical and Materials Engineering Conference will be held in Portland, Oregon, on **3-5 August 1999**. This conference is one of the principal means for technology transfer within the geotechnical, materials, and HTRW areas of the Corps. This conference is considered the primary vehicle for reporting the results of the current technological application by Corps field activities.

A wide range of subjects will be presented. The keynote speaker will be Dr. David Bowles of Utah State University. He will introduce the "Application of Risk Assessment in Dam Safety Evaluation and Management". The keynote address will be followed by a panel discussion on "Application Risk Assessment in Dam Safety Evaluation and Management". The luncheon speaker will be Professor J.M. Duncan of Virginia Polytechnic Institute and State University, who will present "Factors of Safety and Reliability in Geotechnical Engineering". One hundred technical papers on geotechnical, materials, and HTRW topics involving investigation, design, construction and maintenance of Civil Works and Military Projects will be presented at the conference. Problems encountered during project execution will be discussed. A field trip to the Bonneville Lock Rehabilitation Project has been planned as part of the conference on Thursday, 5 August 1999. Workshops on "Geosynthetics", and "Rehabilitation and Maintenance of relief Wells" will be conducted.

Because of the importance of this conference to the effective execution of design, construction and operation & maintenance of Civil Works and Military projects in the areas of geotechnical, materials, and HTRW, maximum participation by the Geotechnical Branch Chiefs and other individuals in these functions is strongly recommended. The U.S. Bureau of Reclamation, along with representatives from other Federal agencies, will be participating in this year's program. The Portland District is acting as the host office.

POC: HARI N. SINGH, CECW-EP, 202-761-4034

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CORPS OF ENGINEERS NATIONAL ENERGY TEAM (CENET) ANNUAL MEETING

The Corps of Engineers National Energy Team (CENET) annual meeting was held 27-29 April 1999, in Clearwater Beach, Florida. CENET provides a forum for input from the field on mechanical and electrical R&D requirements, identifying technology needs, transferring lessons learned, addressing technology breakthroughs, and assessing impact of policy changes. The meeting brought together proponents from a wide variety of Army organizations, including installations, MACOMS, Corps district and division offices and the Corps laboratories. A number of guest speakers from other federal agencies, industry, and academia (including the Navy, Texas A&M, GSA, Defense Energy Support Center and the American Gas Cooling Center) were also in attendance.

A major focus of the meeting was to identify user driven technology needs in the mechanical and electrical disciplines. Breakout sessions and discussion groups were used to develop the highest priority needs. These included Energy Savings Performance Contracting (measurement and verification of actual savings, lessons learned, training); direct digital control system interoperability and BacNet; evaluation of heating supply options; shop floor friendly maintenance management systems; and improving communications between the Corps District, DPW and the facility occupant.

The Energy and Utilities Technology Leadership Group and the Corps Laboratories will use this information to develop and prioritize the R&D program, presenting it to the Strategic Infrastructure Leadership Committee Working Group later this year.

POC: MARTY SAVOIE, CECER-CF-E, 217-373-6762

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DESIGN NOTES FROM THE FEDFACILITIES TRADESHOW AND CONFERENCE

The 1999 FEDfacilities Show was held May 4-5 at the Washington Convention Center, Washington DC.

Technical sessions included the GSA energy information session. Presenters highlighted the Federal facilities' energy reduction mandated goals, and strategies for achieving these goals, including awareness programs, audits, building energy management and retrofitting of energy consuming products. Electric industry deregulation has allowed GSA entry as "Utility Provider of Choice" for other federal agencies. In Pennsylvania, GSA issued a Request for Proposal contract solicitation for power delivery to 26 agencies including the Postal Service, VA and Bureau of Prisons. That one year contract started this January 1. Another pilot project in Maryland meters power usage for ten buildings "on the Internet".

An extensive energy conference “Energy 99” is planned for August 23-25, 1999, in Orlando Florida. This Energy Efficiency Workshop and Exposition is sponsored by DOE/FEMP/GSA/DOD. See website www.energy99.ee.doe.gov for energy design, management and technology topics included.

Tradeshow presentations included commercial and federal products. The metro Washington, DC utility, Pepco, featured an energy management Internet tool "CEO Online", and other consulting and facilities management services. An online demo is available at www.pepco.com . Lighting product information available from Federal agency services included the DOE/FEMP efficiency standards product recommendations, available at www.eren.doe.gov/femp/procurement . Similarly, the DLA/Defense Industrial Supply Center has lighting info online, www.disc.dla.mil/general/light1.htm plus an available CD-ROM disk "Energy Efficient Lighting" product.

POC: NEIL M. MCGRATH, CEMP-EM, 202-761-1596

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WORKSHOP FOR PUBLIC SECTOR ARCHITECTS

The Chief Architect of USACE has been negotiating with the American Institute of Architects (AIA) regarding their possible sponsorship of a workshop for public sector architects in conjunction with the AIA National Convention & EXPO to be held in Philadelphia, PA, 3-7 May 2000. As a result of several very productive meetings, the AIA has agreed, in principal, to sponsor such an event. This unprecedented opportunity to share our professional knowledge has the potential to be a substantive educational and networking event for USACE architects, other federal architects, municipal and state architects, as well as private sector architects. To assist in forming a comprehensive program input is needed. Forward your ideas and recommendations for topics to lawrence.p.delaney@usace.army.mil.

All USACE architects and other interested parties are encouraged you to make plans now to attend the convention and take advantage of the tremendous technical and professional development opportunities available during this national event. Additional information will be made available as it develops. Should you have any questions please contact the point of contact shown below.

POC: LAWRENCE P. DELANEY, CEMP-EM, 202-761-1545

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ASCE CONVENTION

This year’s American Society of Civil Engineers convention is scheduled for 17-20 October 1999, in Charlotte. Attending these types of events is an excellent way to keep up with the latest developments in your profession and bringing fresh ideas into our organization. Attendance to the ASCE convention is highly encouraged. You will find additional information at http:/www.asce.org/conference/99conv/index.html.

POC: RAY NAVIDI, CEMP-ET, 202-761-0223

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Partnering

WATERVLIET ARSENAL: REPAIR OF DREDGE WHEELER PROPULSION TAILSHAFTS

Corps of Engineers' managers spread the word that the Watervliet Army Arsenal was available as an alternative source for machine shop repairs. Members of the Marine Management Section in New Orleans District (CEMVN) investigated the prospect of reducing costs through use of another Government organization's resources. Watervliet Arsenal, located in Watervliet, New York, was constructed in 1813, and has long been recognized in the Department of Defense arena as a premier supplier of a wide variety of defense products specializing in the manufacture of artillery systems. Between the years 1979 and 1992, Watervliet performed a $350 million upgrade and modernization of its plant and equipment.

The job at hand for CEMVN was reconditioning two spare propeller shafts for the government-owned large class Hopper Dredge WHEELER. The shafts are over 47 feet long and weigh approximately 12 tons each. CEMVN saved over $26,000 when compared to the most recent cost for this work by a commercial machine shop. "They dazzled us in all phases," said Ray Newman, Chief of the Corps Marine Management Section. "Their technological capabilities, quality assurance, timeliness, professionalism, and report documentation were outstanding," said Newman. The New Orleans District intends to continue use of Watervliet for manufacture and repair of their large propulsion and dredging components.

POC: RAY NEWMAN, CEMVN-OD-YM, 504-862-2050

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PARTNERING WITH A-E'S

The Associated General Contractors of America (AGC) has annual meetings to which representatives from the Corps of Engineers are invited to discuss issues of mutual interest. These "partnering" meetings have served both participants well by informing the construction contractor community of events or topics that may be of interest to them and offering a forum for open discussion of important issues. The New Orleans District Corps of Engineers is now providing a similar forum to the architect engineer community through the Society of American Military Engineers.

The format for these meetings has representatives from the Corps and from the AE community present items of interest or concern and then open the floor to discussion. Several topics may be on the agenda for each meeting. A Corps representative may present, for example, a discussion on the AE selection process and entertain questions or hear concerns from the AE attendees.

To develop meaningful agenda for these meetings, the District solicits input from the SAME AE membership. Candidate topics are also suggested that may be of value to the AE's.

POC: JIM FLOCK, CEMVN-ED-S, 504-862-2565

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